

IN THE CLAIMS:

Please amend the claims as follows.

Claims 1-24 (Canceled).

25. (Currently amended) An isolated DNA molecule comprising nucleotides 1-29,574 of SEQ ID NO. 3 or an isolated DNA molecule that hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency and which is capable of replicating autonomously as an adenovirus in sheep cells.

26. (Previously presented) The isolated DNA molecule of claim 25, wherein the DNA molecule specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 and shares at least 90% identity therewith.

27. (Currently amended) The isolated DNA molecule of claim 25, wherein the nucleotide sequence molecule is a variant of identical to nucleotide 1-29,574 of SEQ ID NO. 3, except for differences in nucleotide sequences encoding viral polypeptides that do not alter the amino acid sequences encoded by SEQ ID NO: 3 which comprises at least one nucleotide difference in the sequence that does not alter the amino acid sequences encoded thereby.

28. (Previously presented) An isolated DNA molecule comprising the OAV287 inverted terminal repeat consisting of nucleotides 1 through 46 of SEQ ID NO. 3

29. (Currently amended) An isolated DNA molecule comprising ~~nucleotides 1-29,574 of SEQ ID NO. 3 with the exception that the DNA molecule has all or part of the non-essential portion encoding genetic information that is not essential to the maintenance or viability of ovine adenovirus (OAV287) has been deleted or altered, said non-essential portion comprising an open reading frame comprising nucleotides 28487 through nucleotide 29044 of the complement of SEQ ID NO. 3 or an open reading frame comprising nucleotides 28541 through nucleotide 28729 of the~~

~~complement of SEQ ID NO. 3. a nucleotide sequence identical to nucleotides 1-29,574 of SEQ ID NO: 3 except for a deletion or alteration in all or in part of the open reading frame that spans a unique SalI site at nucleotides 28673 – 28678 of SEQ ID NO: 3.~~

Claim 30 (Canceled).

31. (Currently amended) A plasmid comprising a bacterial origin of replication and a first nucleotide sequence as set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and which is capable of replicating autonomously as an adenovirus in sheep cells.

32 (Previously presented) The plasmid of claim 31 wherein the second nucleotide sequence hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 and shares at least 90% identity therewith.

33. (Currently amended) The plasmid of claim 31 or 32 wherein ~~the first or second nucleotide sequence is operatively linked to~~ a third nucleotide sequence encoding a non-adenovirus polypeptide is inserted into the first or second nucleotide sequence in a region that is non-essential for to replication of the adenoviral genome in sheep cells.

34. (Previously presented) The plasmid of claim 33 wherein the inverted terminal repeats of the first nucleotide sequence are linked together or the inverted terminal repeats of the second nucleotide sequence are linked together.

35. (Previously presented) The plasmid of claim 33 wherein the third nucleotide sequence encodes resistance to an antimicrobial agent.

36. (Currently amended) An adenoviral vector which is capable of replicating autonomously as an adenovirus in sheep cells comprising (1) a first nucleotide sequence having the

sequence as set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions and (2) a third nucleotide sequence encoding at least one non-adenoviral polypeptide.

37. (Previously presented) The adenoviral vector of claim 36, wherein the second nucleotide sequence specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 and shares at least 90% identity therewith.

Claim 38 (Canceled).

39. (Previously presented) The adenoviral vector of claim 36 or 37, wherein the non-adenoviral polypeptide is a bacterial, viral, parasite or eucaryotic polypeptide.

40. (Previously presented) The adenoviral vector of claim 39, wherein the non-adenoviral polypeptide is selected from rotavirus VP7sc antigen, *Trichostrongylus colubriformis* 17 kD antigen, *Taenia ovis* 45W antigen and *Lucila cuprina* PM95 antigen.

41. (Currently amended) A method of inducing an immune response in a mammal comprising administering to the mammal ~~delivering a DNA molecule encoding at least one non-adenoviral polypeptide to a mammalian target cell comprising transfecting the target cell with an adenoviral vector~~ which is capable of replicating autonomously as an adenovirus in sheep cells, said adenoviral vector comprising (1) a first nucleotide sequence set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions; and (2) a third nucleotide sequence encoding at least one non-adenoviral polypeptide inserted into a region of the first or second nucleotide sequence that is non-essential for replication of the adenoviral genome in sheep cells,

wherein the adenoviral vector transfects target cells and at least one polypeptide is expressed in the target cell.

42. (Currently amended) A method of inducing an immune response in a mammal ~~delivering a DNA molecule encoding at least one non-adenoviral polypeptide to the mammal~~ comprising administering to the mammal an adenoviral vector which is capable of replicating autonomously as an adenovirus in sheep cells, said adenoviral vector comprising (1) a first nucleotide sequence as set forth in nucleotides 1-29,574 of SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotide 1-29,574 of SEQ ID NO. 3 under high stringency conditions; and (2) a third nucleotide sequence encoding at least one non-adenoviral polypeptide, wherein the adenoviral vector transfects at least one cell of the mammal and the at least one polypeptide is expressed therein.

43. (Previously presented) The method of claim 42, wherein the adenoviral vector is administered to a grazing mammal.

44. (Previously presented) The method of claim 43, wherein the adenoviral vector is administered to a sheep.

45. (Currently amended) An adenoviral vector which is capable of replicating autonomously as an adenovirus in sheep cells comprising (1) a first nucleotide as set forth in SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions; and (2) a nucleotide sequence encoding an RNA molecule.

46. (Previously presented) The adenoviral vector of claim 45, wherein the RNA molecule is an antisense RNA molecule or ribozyme.

47. (Currently amended) A method of inducing an immune response in a mammal ~~delivering a DNA molecule encoding a functional RNA molecule to a mammal~~ comprising administering to the mammal an adenoviral vector which is capable of replicating autonomously as an adenovirus in sheep cells, said adenoviral vector comprising (1) a first nucleotide sequence as set forth in SEQ ID NO. 3 or a second nucleotide sequence that specifically hybridizes to the complement of nucleotides 1-29,574 of SEQ ID NO. 3 under high stringency conditions; and (2) a nucleotide sequence encoding an RNA molecule, wherein ~~adenovirus~~ the adenoviral vector transfects at least one cell of the mammal and the nucleotide sequence encoding the RNA molecule is expressed therein.

48. (Previously presented) A plasmid comprising a DNA molecule having the nucleotide sequence as set forth in SEQ ID NO. 3.

49. (Currently amended) A plasmid comprising a DNA molecule having a first nucleotide sequence that specifically hybridizes to nucleotides 1-29574 of SEQ ID NO. 3 under high stringency and a second nucleotide sequence encoding a bacterial origin of replication, wherein the first nucleotide sequence comprises ovine adenovirus inverted terminal repeat sequences that are linked by a third nucleotide sequence which contains at least one unique restriction enzyme site that is not present in the first nucleotide sequence, said plasmid being capable of replicating autonomously as an adenovirus in sheep cells.

50. (Previously presented) A plasmid comprising the DNA molecule of claim 29.

51. (Previously presented) A vector comprising the DNA molecule of claim 29.